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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/614,277

07/08/2003

Haruyoshi Ono

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02/26/2009

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EXAMINER

VAN ROY, TOD THOMAS

ART UNIT

PAPER NUMBER

2828

MAIL DATE

DELIVERY MODE

02/26/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/614,277

Applicant(s)

ONO ET AL.

Examiner

TOD T. VAN ROY

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period **will** apply and **will** expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply **will**, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 November 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/18/2008 has been entered.

Response to Amendment

The examiner acknowledges the amending of claims 9, 14, 19, and 24.

Response to Arguments

Applicant's arguments with respect to claim 9 have been considered but are moot in view of the new ground(s) of rejection.

The Examiner agrees that the current amendment directed towards the setting value **not** being a center value of the power intensity variable range is not disclosed by the previously cited prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

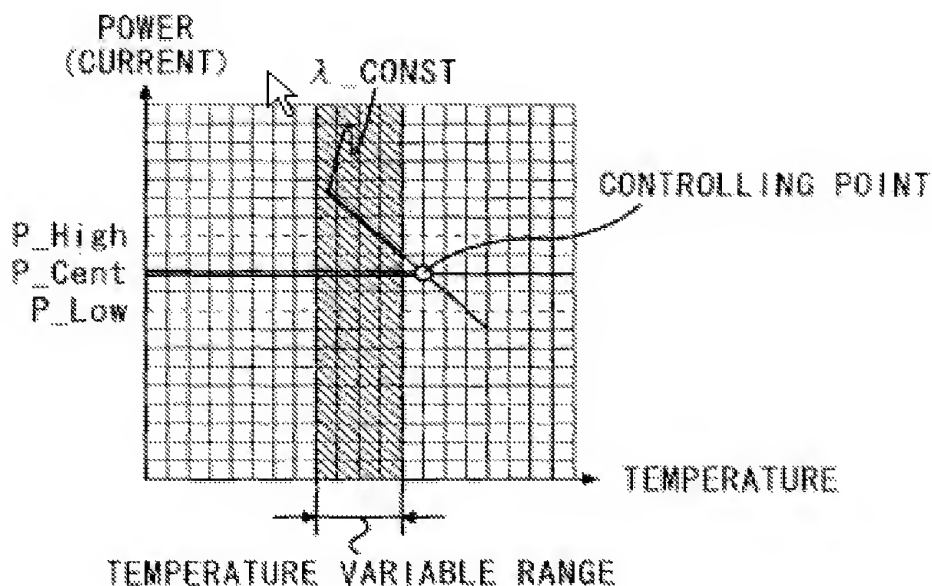
Claims 9-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's disclosed prior art (hereafter 'prior art').

With respect to claims 9 and 19, the prior art teaches a setting value generating device that generates such a setting value that causes laser light emitted from a laser module to have a predetermined wavelength (λ target, spec. pg.4 line 17) and satisfies predetermined temperature conditions and predetermined power intensity conditions (fig.3a, defined temp / power ranges), the setting value generating device comprising: an optimum power intensity calculating unit (fig.1 #120) that calculates an optimum power intensity setting range (fig.3a) that maintains the predetermined wavelength falls within a predetermined power intensity variable range (range can be considered equal to the intensity setting range, fig.3a) a predetermined power intensity variable range (maintained via APC feedback); an optimum temperature calculating unit (fig.1 #120) that calculates an optimum temperature setting range (fig.3a, pgs.4-5 lines 37-9) that maintains the predetermined wavelength and falls within a predetermined temperature variable range; and a setting value generating unit (fig.1 #120) that generates the setting value based on the optimum power intensity setting range

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(optimum is P_cent) calculated by the optimum power intensity calculating unit and the optimum temperature setting range calculated by the optimum temperature calculating unit (setting values generated based on temp/wavelength/power, pg.6 lines 17-21), wherein the laser module can be operated with the setting value that is located within the predetermined temperature setting range and the predetermined power intensity setting range even when the laser module *operates outside of* the predetermined temperature variable range at center value of the predetermined power intensity variable range while the laser light is kept at the predetermined wavelength (As described at pgs.3-7 of the disclosure and figs.2/3b, the AAPA is shown to follow the steps of setting initial values S11 and later continuing to test the actual wavelength S22, as the device operates with given setting values in place it is possible that step S22 takes place upon drifting over time to a controlling point outside of the temperature variable range but still at P_cent and on the predetermined wavelength shown in fig.3b, at this point the S22 step can be preformed, obtaining zero error, and allowing the device, however briefly, to continue to operate with the given initial setting values while the temperature is outside of the temperature variable range).

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The prior art does not teach the setting value to have a power different from a center value of the predetermined intensity variable range (prior art sets the value at P_cent, fig.2 S13). It would have been obvious to one of ordinary skill in the art at the time of the invention to adjust the automatic power control (APC) setting value to be a value other than the central power value as a matter of engineering design choice, which would allow for values of increased, or decreased, power to be used during varied operating conditions.

With respect to claims 10 and 20, the prior art teaches a relational expression defining unit (fig.1 #120) that defines a relational expression between a temperature and a power intensity that causes the laser module to maintain the predetermined wavelength (T_cal defined on pg.4, relating temperature, wavelength, and inherently relating the power intensity as the power intensity applied to the device influences both the temperature of the device itself, as well as the wavelength the device is outputting

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under the current conditions); a power intensity upper and lower limit defining unit (fig.1 #120, shown defined in fig.3a) that defines an upper limit value and a lower limit value of a power intensity that satisfies the relational expression and also satisfies the predetermined temperature range and the predetermined power intensity range (P_{High} , P_{Low}); wherein the optimum power intensity calculating unit calculates the optimum power intensity that is the middle value between the upper limit value and the lower limit value of the power intensity defined by the power intensity upper and lower limit defining unit (see claim 1); and the optimum temperature calculating unit substitutes the optimum power intensity calculated by the optimum power intensity calculating unit in the relational expression defined by the relational expression defining unit (see claim 1, also, the P_{cent} value is set prior to the temp feedback loop, so the value would be used in the calculation as described in the rejection to claim 1, fig.2 S14).

With respect to claims 11 and 21, the prior art teaches the laser module can vary wavelengths (inherent, set target wavelength would not be necessary if only 1 wavelength were possible), and the setting value is generated in relation with each of the wavelengths (setting value generated with chosen target wavelength).

Claims 12 and 22 are rejected for the reasons outline in the rejections to claims 10 and 11. The prior art has taught the presence of multiple wavelengths being present in the transmitting device, each being stabilized when appropriately selected. It is inherent that there would be a shortest wavelength and a longest wavelength available,

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and that the relational expression unit, and power and temperature calculating unit (fig.1 #120) would control the shortest and longest wavelength conditions respectively.

With respect to claims 13 and 23, the prior art teaches a setting value storage unit that stores the setting value generated by the setting value generating unit, wherein the laser module contains unique identification information, and the setting value storage unit relates the setting value to the unique identification information and stores the setting value (pg.6 lines 17-24).

Claims 14-18 are rejected for the same reasons given in the rejection to claims 9-13, as they are the methods for calculating the setting value that has been taught in the prior art.

Claim 24 is rejected for the same reasons given for the rejection to claims 9 and 19 above, as it is inherent that a recording medium of some type must be present for the computer functioning as the calculating unit to run the given program since the program itself must have been recorded to be read by the computer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOD T. VAN ROY whose telephone number is (571)272-8447. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Minsun Harvey can be reached on (571)272-1835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Tod T Van Roy/
Examiner, Art Unit 2828